ABSTRACT

A bistatic radar system (100), method and computer program (178) are provided for mapping of oceanic surface conditions. Generally, the system (100) includes at least one transmitter (102) and at least one receiver (106) located separate from one another, and each having a local oscillator locked to a Global Positioning System (GPS) signal received by a GPS synchronization circuit (134) to provide the necessary coherency between the transmitted and received signals. Preferably, the present invention enables an existing backscatter radar systems to be quickly and inexpensively upgraded to a bistatic radar system (100) through the addition of a transmitter (102) and/or receiver (106) separate from the backscatter radar system, the GPS circuit (134), and use of the computer program (178) and method of the present invention.